

PROGRAMMING

This decoder supports all programming methods including: register, paged CV, direct CV, and programming on the main (ops mode programming).

CV	Register	Description	Range	Default
CV1	R1	Short address	1-127	3
CV2	R2	Start voltage	0-32	0
CV3	R3	Acceleration	0-32	0
CV4	R4	Deceleration	0-32	0
CV5	---	Top voltage	0-32	32
---	R6	Page number	---	---
CV29	R5	Basic configuration	---	2
CV7	R7	Manufacturer version number	---	32
CV8	R8	Manufacturer ID	---	143
CV17	---	Long address upper byte	192-231	192
CV18	---	Long address lower byte	0-255	3
CV19	---	Advanced consist address	0-127	0
CV21	---	When CV21=0, all accessory functions will follow its own address. When CV21=1, all functions will follow the consist address	---	0
CV49	---	Sound on/off (0=on)	0-1	0
CV50	---	Horn type	0-10	4
CV51	---	Horn volume	0-3	3
CV52	---	Bell type	0-6	3
CV53	---	Bell volume	0-3	3
CV54	---	Bell ring rate	0-50	3
CV55	---	Diesel rumble volume	0-3	3
CV56	---	Brake squeal volume	0-3	3
CV57	---	Dynamic brake volume	0-3	3
CV58	---	Air release volume	0-3	3
CV59	---	Air pump volume	0-3	3
CV60	---	Safety pop valve volume	0-3	3
CV61	---	Engine cooling fan volume	0-3	3
CV62	---	Coupling volume	0-3	3
CV63	---	Random noise volume	0-3	3
CV64	---	Rail wheel clack	0-3	3
CV105	---	User identification number	0-255	0
CV106	---	User identification number	0-255	0
CV112	---	Light effects	see chart	0
CV113	---	Ditch light rate	0--20	3
CV114	---	Light brightness (green, brown)	0-12	3
CV115	---	Auto brake squeal enable/disable	0-1	1(enable)
CV116	---	Coupling sound type	0-2, 2=off	1
CV117	---	Lights enable/disable	0-1	1(enable)
CV118	---	Exhaust volume	0-3	3
CV119	---	Coupling fire volume	0-3	3
CV120	---	Brake release volume	0-3	3
CV122	---	Diesel sound type (0=off, 1=rpm & notch synchro to speed, 2=linear rpm synchro to speed, 3=notch up/down (F8=notch down, F9=notch up))	0-3	1
CV123	---	back emf on/off (1=on)	0-1	0
CV124	---	Speed curve select (0=linear, 1=slow increase at slow speed, 2=fast increase at slow speed)	0-2	0
CV125	---	Factory default setting: Programming to 1 will restore all CV's to default setting	---	0

NOTE: Due to limitations in older DCC systems, some of the sound functions or light effects functions may not be accessible. ALSO, you might be limited to factory default CV values.

LIGHT EFFECT PROGRAMMING CHART FOR CV#112

Your MRC Synchronized Diesel Sound Decoder is equipped with normal directional lighting, plus MRC light effects. By using the blue common wire and a combination of the green and brown wires on the decoder board (see wiring diagram) you can choose from ditch lights, mars light or strobe light. Your diesel loco can also have "Rule 17" directional headlights, through simple programming, without any complicated wiring.

Light Effect	Head Light (white wire)	Rear Light (yellow wire)	Brown wire	Green wire	CV value
CV#112	Normal on/off	Normal on/off	Ditch light	Ditch light	0
CV#112	Normal on/off	Normal on/off	Mars light	Single strobe light	1
CV#112	Normal on/off	Normal on/off	Mars light	Double strobe light	2
CV#112	Rule 17	Rule 17	Ditch light	Ditch light	16
CV#112	Rule 17	Rule 17	Mars light	Single strobe light	17
CV#112	Rule 17	Rule 17	Mars light	Double strobe light	18

TROUBLE SHOOTING

The MRC 0001632/33 HO diesel sound decoder should perform well with all DCC systems. See your DCC system manual to learn how to program and operate the decoder. For more information about register/CVs and their functions, please refer to the NMRA DCC Standard & Recommended practices, RP-9.2.2 this is available directly from the NMRA or their website at www.nmra.org.

Due to the nature of all sound decoders, the CV read back is not 100% correct. So this feature is not supported in the decoder. This is not a defect of the decoder or your DCC.

Whenever the decoder doesn't work please use program track to re-program the loco address or program CV# 125 with value 1 to restore the decoder to factory setting. This should bring the decoder to life.

FCC COMPLIANCE

This device complies with the part 15 of FCC rule. Operation is subject to the following two conditions. (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that cause undesired operation.

RETURN PROCEDURE

If it should become necessary to return your decoder, unplug the decoder and return the decoder only. Please include a letter (printed clearly) with your name, address, a daytime telephone number, and a detailed description of the problem you are experiencing. Please also include a \$15.00 check for shipping and handling. **Be certain to return only the decoder.**

Send the decoder to:

Model Rectifier Corporation
Attn: Parts & Service
80 Newfield Avenue
Edison, NJ 08837-3817 U.S.A

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HO Gauge Synchronized Diesel Sound Decoder with 19 Accessory Sound Functions

Item #0001632/33

Thank you for purchasing our highly advanced DCC locomotive sound decoder. Combined with any DCC System, our new decoder with authentic diesel sound truly will make your model railroad come to life.

- Synchronized diesel prime mover with randomly associated locomotive sounds
- User selectable 11 different horns and 7 bells
- 19 accessory functions allowing more sound control than ever
- Programmable individual sound volumes
- 1.5 amp capacity
- Programmable for either 2-digit (1-127) or 4-digit (1-9999) addresses
- Programmable start voltage
- Programmable acceleration rate
- Programmable deceleration rate
- Programmable top voltage
- Programmable 14, 28, 128 speed steps
- Selectable factory default speed curve
- Directional lighting (FO) at 0.2 amp rate
- Programmable "Rule 17" directional lighting
- Programmable for either ditch lights, mars light, or strobe light
- Supports advanced consisting (CV19)
- Supports programming on the main (OPS mode)
- Compatible with NMRA DCC standards
- NMRA 8 pin plug included for easy installation
- Complies with Part 15 of FCC
- 28mm speaker included
- Dimensions: 48.0mm x 17.0mm x 7.5mm

